

IN THE CLAIMS

1. **(Currently Amended)** A system comprising:
  - a metropolitan area network (MAN);
  - a first virtual local area network (VLAN); **and**
  - a second VLAN, wherein the second VLAN **comprises subsumes** the first VLAN;
  - a first switch coupled to the first and second VLANs, the first switch to receive from the first VLAN a data packet having a first VLAN ID associated with the first VLAN, to replace the first VLAN ID with a second VLAN ID associated with the second VLAN, and to forward the modified data packet to the second VLAN;** and
  - a **second** switch coupled to the MAN and the ~~first and~~ second VLAN[[s]], **the second switch** to receive from the ~~first~~ **second** VLAN [[a]] **the modified** data packet ~~having a first VLAN ID associated with the first VLAN, to replace the first VLAN ID with a second VLAN ID associated with the second VLAN, wherein the second VLAN ID is different from the first VLAN ID,~~ and to forward the modified data packet ~~from the first VLAN~~ to the MAN.
2. **(Currently Amended)** The system of claim 1, wherein the second VLAN **further comprises also subsumes** a third VLAN, and wherein the **first** switch further to prevent the modified data packet from the first VLAN from being forwarded to the third VLAN.
3. **(Currently Amended)** The system of claim 2, wherein the **first** switch to further maintain a forwarding data base (FDB) for the first, second, and third VLANs, wherein each FDB contains one or more media access control (MAC) address entries.

4. (Currently Amended) The system of claim 3, wherein the first switch to maintain a FDB for the first, second, and third VLANs comprises the first switch to add a new MAC address entry to the FDB for each of the first, second, and third VLANs when a new MAC address is learned from the first, second, or third VLAN.

5. (Currently Amended) The system of claim 1, wherein the second switch further to receive from the MAN a second data packet having the second VLAN ID, to forward the second data packet to the first switch, wherein the first switch to replace the second VLAN ID with the first VLAN ID, and to forward the modified second data packet from the MAN to the first VLAN.

6. (Previously Presented) The system of claim 1, wherein the first VLAN ID is obtained from a header encapsulating the data packet.

7. (Previously Presented) The system of claim 6, wherein the header encapsulating the data packet is an Institute of Electrical and Electronics Engineers (IEEE) 802.1Q frame tag.

8. (Previously Presented) The system of claim 1, wherein the second VLAN ID is obtained from a header encapsulating the data packet.

9. (Previously Presented) The system of claim 8, wherein the header encapsulating the data packet is an Institute of Electrical and Electronics Engineers (IEEE) 802.1Q frame tag.

10. (Currently Amended) The system of claim 1, wherein the first VLAN ID is obtained from an internal value stored in the first switch.

11. (Currently Amended) The system of claim 1, wherein the second VLAN ID is obtained from an internal value stored in the first switch.

12. (Currently Amended) A method comprising:

receiving a data packet from a first virtual local area network (VLAN) at a first switch coupled to ~~a metropolitan area network (MAN), a first virtual local area network (VLAN), and the first VLAN~~ and a second VLAN, ~~a data packet from the first VLAN,~~ wherein the second VLAN subsumes the first VLAN;

verifying the data packet having a first VLAN ID in the data packet, wherein the first VLAN ID is associated with the first VLAN;

replacing the first VLAN ID with a second VLAN ID associated with the second VLAN, ~~wherein the first VLAN ID is different from the second VLAN ID;~~ and

forwarding the modified data packet from the ~~first~~ second VLAN to ~~the a~~ metropolitan area network (MAN) via a second switch.

13. (Currently Amended ) The method of claim 12, further comprising receiving at the second switch ~~from the MAN~~ a second data packet from the MAN having the second VLAN ID, replacing the second VLAN ID with the first VLAN ID, and forwarding the modified second data packet ~~from the MAN~~ to the first VLAN.

14. (Previously Presented) The method of claim 12, further comprising obtaining the first and second VLAN IDs from the data packet.

15. (**Currently Amended**) The method of claim 12, further comprising obtaining the first and second VLAN IDs from internal values stored in the **first** switch.

16. (Previously Presented) The method of claim 12, further comprising preventing the data packet originating from the first VLAN from being forwarded to a third VLAN.

17. (Previously Presented) The method of claim 16, further comprising maintaining a forwarding data base (FDB) for the first, second, and third VLANs, wherein each FDB contains one or more media access control (MAC) address entries, and adding a new MAC address entry to the FDB for each of the first, second, and third VLANs when a new MAC address is learned from the first, second, or third VLAN.

18. (**Currently Amended**) An article of manufacture comprising:

a machine accessible medium including content that when accessed by a machine causes the machine to

receive **a data packet from a first virtual local area network (VLAN)** at a **first** switch coupled to ~~a metropolitan area network (MAN), a first virtual local area network (VLAN),~~ **the first VLAN** and a second VLAN, ~~a data packet from the first VLAN,~~  
**wherein the second VLAN subsumes the first VLAN;**

~~verify a first VLAN ID in~~ the data packet, ~~wherein having a first the data packet~~  
~~having a the~~ first VLAN ID is associated with the first VLAN;  
replace the first VLAN ID with a second VLAN ID associated with the second  
VLAN, ~~wherein the first VLAN ID is different from the second VLAN ID~~; and  
forward the modified data packet ~~from the first VLAN to the~~ a metropolitan area  
network (MAN) via a second switch.

19. (Currently Amended) The article of manufacture of claim 18, further comprising a machine accessible medium including content that when accessed by a machine causes the machine to receive at the second switch from the MAN a second data packet having the second VLAN ID, replace the second VLAN ID with the first VLAN ID, and forward the modified second data packet from MAN to the first VLAN.

20. (Currently Amended) A switch comprising:  
a port for receiving a data packet from a first virtual local area network (VLAN);  
an assigner to assign a first VLAN ID to the data packet that identifies the first VLAN;  
a verifier to verify that the assigned first VLAN ID matches a value stored in a memory of the switch;  
a controller to control the processing of the verified data packet and to replace the verified first VLAN ID with a second VLAN ID that identifies a second VLAN, wherein the second VLAN subsumes the first VLAN; and

a forwarder to forward the modified data packet to ~~the~~ a metropolitan area network (MAN).

21. (Previously Presented) The switch of claim 20, wherein the assigner further identifies the second VLAN based on the contents of the data packet's source Internet Protocol (IP) address.

22. (Previously Presented) The switch of claim 20, wherein the assigner to assign the first VLAN ID comprises the assigner to obtain the first VLAN ID from a header encapsulating the data packet.

23. (Previously Presented) The switch of claim 20, further comprising a preventer to prevent the data packet from being forwarded to a third VLAN.

24. (Previously Presented) The switch of claim 20, further comprising:  
a second port for receiving a second data packet from the second VLAN, and wherein the assigner to assign the second VLAN ID to the second data packet that identifies the second VLAN, the verifier to verify that the assigned second VLAN ID matches a second value in the memory of the switch, the controlling to replace the verified second VLAN ID with the first VLAN ID that identifies the first VLAN, and the forwarder to forward the modified second data packet to the first VLAN.